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ABSTRACT

While teachers are becoming increasingly aware of different learning styles, they have generally rejected the practical use of learning styles in the classroom. This bulletin summarizes theories and findings on learning styles, demonstrates their use in exceptional and regular classrooms, and offers recommendations for those who want to use the learning style approach. Chapter 1 begins by defining learning styles and summarizing the pioneering efforts of Rita Dunn, Anthony Gregorc, and Bob Samples. The chapter next summarizes learning styles research and the development of various instruments, including the Learning Style Inventory, ORGANON, and the 4MAT System. Studies of students' preferences concerning lighting, room temperature, mobility, scheduling, and other factors are examined for their effects on academic achievement. Chapter 2 summarizes interviews with teachers involved in Oregon's Talented and Gifted (TAG) program and regular teachers experimenting with learning styles methods in their classrooms. A middle school teacher, for example, reports good results with students who fail written tests, but excel when allowed to discuss their knowledge. Chapter 3 underlines the importance of learning styles theory to educational reform and recommends several steps for adopting this emphasis, including: gaining administrative support; coordinating preservice teacher training; involving teachers, parents, and students; and developing a solid research base. Included are a bibliography of 14 references and a list of 10 interviews. (MLH)

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Celebrating Students' Diversity Through Learning Styles

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Celebrating Students' Diversity Through Learning Styles

Karin Hilgersom-Volk

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Preface

Education does not exist in a vacuum. Outside influences play a major role in how teachers teach and how students learn. Moreover, students and teachers bring personal, stylistic differences that similarly influence teaching and learning. The best teachers not only recognize the diversity these influences create, but capitalize upon this diversity as well.

This Bulletin begins with a discussion of the theories and findings on learning styles. Learning styles are a delivery technique that celebrates the unique ways in which we learn. Next, this Bulletin describes the practice of several school teachers and administrators who have dedicated themselves to teaching by learning styles. Finally, the author draws recommendations for school districts that accept the challenge and application of learning styles.

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Philip K. Piele
Executive Secretary

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Introduction

Approximately 449,307 children attend public schools in the state of Oregon. Of these, nearly 24,000 qualify as at risk students (Oregon Department of Education 1987). Now more than ever, teachers and administrators are charged with the complex task of providing quality education to these youths. Scott D. Thomson, executive director of the National Association of Secondary School Principals (NASSP), eloquently sums up the theme of the education reform movement:

> In short, how can the rigor of schools be enhanced and the achievement of students be improved; in short, what conditions enhance the probability that students will master the material taught? This is, in sum and substance, America's current agenda for education. (1986)

Changes in education do not happen overnight. Any kind of change or reform must break the barrier of tradition.

> It should be apparent that the teaching profession is characterized by continuity and constancy. Some might even say that it is characterized by heavy, change-resisting inertia. (Case 1985)

During the last decade, teachers have been asked to recognize, to adapt to, and to capitalize upon the unique learning styles of their students. Literature and conferences have exposed teachers to various learning style inventories and techniques. By and large, teachers have responded by accepting a newfound awareness of learning styles while rejecting their practical use in the classroom. For many teachers, methods are warmed by the blanket of tradition. With few exceptions, teaching goes on much like it always has.

Certainly not all traditions are "bad." Many are vital. And certainly, many teachers appear to be open to new methods with respect to learning styles. Unfortunately, most have dismissed working with learning styles as too complex, too impractical, and overwhelming in possibility.

Educators would do well by somehow making sense of the learning style muddle. Somewhere, in the mound of learning style categories, typologies, and technologies, are practial methods that teachers can use on a daily basis. Fortunately, the confusion is not one of attitude, but one of know how.

The first chapter of this Bulletin briefly summarizes the major findings of learning styles research. The second chapter describes how Oregon's educators have responded to learning styles. Chapter 3 recommends desirable practices that arise from this investigation.

Chapter 1

Overview of Theories and Findings on Learning Styles

Research supports the application of learning styles in our classrooms. This chapter presents that research by addressing (1) the various definitions of learning styles, (2) the development of learning styles research, and (3) the effects of learning styles on student achievement.

What Are Learning Styles?

Every human being has a unique way of perceiving, evaluating, and communicating. These differences are matters of personal style. Our classrooms are as diverse in types of style as our "melting pot" nation is diverse in types of people. It is small wonder that recognizing diversity is easier said than done.

Much research has led to the recognition of learning styles. Wider awareness of the concept occurred in 1979 with NASSP's publication of *Student Learning Styles: Diagnosing and Prescribing Programs*, in which the association's director of research, James Keefe, sought to present a research base that would make learning styles more practial to teachers. Keefe defined *learning styles* as

> characteristic cognitive, affective, and physiological behaviors that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment.

In short, learning styles are unique internal processes that guide how we take in information from our environment.

Recent definitions of learning style are more profound. At the March 1987 conference of the Association for Supervision and Curriculum Development in New Orleans, several distinguished contributors to the study

of learning styles participated in a panel titled "Learning/Teaching Styles and Brain Behavior." Rita Dunn, Anthony Gregorc, Bernice McCarthy, Gordon Lawrence, and Bob Samples each offered a particular interpretation of learning styles.

Dunn began by defining five strands of work associated with learning styles. First, much of the past research has dealt with how children respond in different environments. Differences in how children work in varying sound, light, temperature, and design conditions belong to the *environment* strand. *Emotional response* is the second strand. Our emotions, motivations, and willingness to conform all affect our abilities to learn. Third, the *sociological* strand examines how well students learn alone, in pairs, or in groups. The fourth strand, *physical elements*, studies which of our five senses provides the best intake of information. Finally, research dealing with global versus analytical thinking styles and brain hemispheric styles belongs in the *psychological* strand of work about learning styles.

Although Dunn admits that the mass of growing research can overwhelm teachers, she feels strongly that

> we can show any teacher, who's interested, in eight days how to manage a system where every single youngster learns in ways that complement his learning styles. (Dunn 1987)

All teachers, Dunn insists, can learn how to effectively apply learning styles in their classroom, but many undoubtedly need instruction on how to do so. Dunn's mission is clear: "Unless we individualize instruction, we don't know what we're doing." She boldly sums the research:

> Every single time we identify children's learning styles, and teach them to their style instead of against their style, we significantly increase achievement, and improve attitude.

Research about learning styles overwhelmingly supports its classroom application. Bob Samples sees learning styles research as a reversal of traditional behaviorism that perpetuates mediocrity in our classrooms. To Samples, diversity is part of the "human condition." Past research narrowly defined learning, and schools adopted restrictive priorities. "The sun is setting on that particular era."

Samples celebrates the ultimate focus of learning styles: perceiving children as unique individuals. Later in the program, Anthony Gregorc offers an explanation for educators' difficulty in applying this focus. He argues that many teachers lack the courage to individualize. Teachers instead cling to what Gregorc calls the "average child concept," which views children as groups of similar classmates. Some teachers do not feel that children are even human beings, Gregorc claims. Instead, they relate to children only as a

collective "class." Furthermore, the educational establishment supports the average child concept in its traditional procedures. Gregorc adopts the psychological strand when he defines learning styles as:

> outer behaviors, characteristics and mannerisms, which tell the outer world about the psychological world within each of us.

Gregorc's purpose is twofold. First, teachers must learn to honor their own individual learning styles. Second, teachers must attempt to facilitate the true ability of the learner. Not to do so has serious implications. "To purposefully cause mental distress by presenting materials in ways that they (learners) cannot truly fashion and handle, is indeed a *moral* issue."

To the extent that Gregorc is arguing for an extreme application of individualized instruction for students, we can note a division among learning style advocates. McCarthy represents the opposite view in that learners should be taught how to adapt to a variety of learning styles. She believes that it is impossible to individualize all the time:

> The real meaning of learning style theory lies in the process required to move all learners through a cycle of learning that encompasses all four styles while still honoring and developing the uniqueness of each style as we go.

She warns:

> We must exercise great care not to make our students objects in this enterprise. We could easily do this by embracing narrow definitions and prescriptive structures that do not move, grow, or evolve. Rather we need to use learning styles to lead our students to see the beauty of their own uniqueness.

Indeed, the growing number of diagnostic instruments serve to categorize children in a variety of types. Educators need to decide whether or not the dangers of categorization are outweighed by the advantages of greater understanding between teachers and individual learners. The dangers of categorization, however, diminish when teachers recognize that categories are frequently temporary, sometimes inaccurate, and simplistic.

Recent definitions of styles are based upon decades of thought. The next section traces the history behind the concept of learning styles and notes some specific ways that educators and researchers apply learning styles.

Development of Learning Styles Research

Pat Guild and Stephen Garger's recent book *Marching to Different*

Drummers expertly summarizes the history of thinking about learning styles. According to Guild and Garger (1985), a turning point for learning styles study occurred in 1890 when psychologist, philosopher, and educator William James portrayed thinking in terms of three differing styles: cognitive, conceptual, and affective. These styles affect how we perceive, gain knowledge, process ideas, store information, respond, judge, and come to know. For example, some arrive at a particular conclusion with visual imagery, whereas others rely upon tactile information.

James's ideas spawned a body of research commonly referred to as modality or mode research. Most teachers and administrators seem to be aware of the four basic modal types: audio, visual, kinesthetic, and tactile. Of all the learning styles research, it is the recognition of these modes that many educators rely upon.

Continued work on cognitive learning style was championed by Carl Jung in 1921. Later Isabel Myers and Katharine Briggs extended Jung's work in the sensing/intuition, thinking/feeling, and introvert/extrovert categories of style. Following Jung, Herman Witkin in the 1970s added the terms "field dependent" (dependent upon environmental cues during perception) and "field independent" (not reliant upon the surrounding field) to the culminating perception research.

The Learning Style Inventory

In the seventies, Rita and Kenneth Dunn began to contribute significantly to the area of learning styles. Their work led to a redefinition of the role of the teacher:

> The teacher becomes more professional and assumes the functions of learning facilitator, guide, consultant, professional diagnostician and prescriber of learning resources, activities, evaluation procedures and total learning packages (called contracts) for each student. The process places more responsibility for learning on the student and makes better use of his individual interests, goals, and strengths. (1972)

The Dunns and Price (1978) created a self-reporting instument called the Learning Style Inventory (LSI), which introduces four basic stimuli (Environmental, Emotional, Sociological, Physical) and eighteen different elements that affect a person's ability to learn. The teacher can translate each student's responses to the inventory into an individual student profile. From the LSI, teachers can learn a lot about the way their students learn.

ORGANON

More recently, Gregorc has devised the ORGANON system, which offers a viewpoint of how and why the human mind functions. Gregorc's (1982) system is composed of two continuums that intersect on an axis. One continuum details the way we perceive in either abstract images at one extreme or concrete images at the other. The intersecting continuum suggests that some of us order information in a sequential or linear fashion, whereas others order information in a random, nonlinear way. Like the LSI, Gregorc's conception of learning style can also be translated into a personal style profile for each student.

4MAT System

Another recent, popularized notion of learning styles is the 4MAT System developed by McCarthy (1980), who describes four types of learners that are juxtaposed on the left and right brain hemispheres.

Type 1 learners tend to ask "Why?" Their perceptions are founded on concrete experience. Information is processed by way of reflective observation. These learners are analytical and probing; they seek a connection between their values and how learning relates to those values.

Type 2 learners ask "What?" Perceptions are based upon abstract conceptualization, and, as is the case with type 1 learners, information is processed via reflective observation. These learners like precision and factual information presented in an organized and precise format. They prefer to accumulate knowledge while readily accepting the authority figure who imparts that knowledge.

Type 3 learners ask "How?" Like type 2 learners, they perceive by abstract conceptualization, but they process information by active experimentation. These learners make marvelous "tinkerers." They like to discover how something works and enjoy finding out how an abstract idea works in reality. They are doers who search for practical application of knowledge.

Finally, type 4 learners ask "If?" Perceptions are founded upon concrete experience, and information is processed with active experimentation. These learners are able to see complex relationships between things and ideas. They are infectious in their enthusiasm about learning. Type 4 learners have a talent for creatively synthesizing the skills and knowledge others provide.

These four quadrants are further split in half, in recognition of dominant right or dominant left hemisphere brain functionings.

McCarthy has devised numerous lessons for all educational levels. She demonstrates how teachers can move through the eight quadrants and teach

virtually any content to better suit various learning styles. For McCarthy, categorizing students is not nearly as useful as helping students learn how to adapt to a variety of learning modes. A teacher should be wary of labeling students and instead should rely on teaching methods that capture a variety of styles.

Shortcomings of Inventories

Once again, the different points of view of learning style scholars emerge. Jill Gomery, president of the Oregon Learning Style Association, has provided workshops and inservice programs to a number of participants. She suggests that on one end of the learning style continuum are the learning style inventory advocates such as the Dunns, who believe that a diagnostic inventory is essential for individualizing instruction. At the other end of the spectrum, McCarthy argues that inventories are not necessary, since teachers best serve students by applying all the modes in their teaching.

According to Gomery, the center of the continuum is the best place to be. Inventories allow students to become familiar with their own style of learning, as well as with their teacher's learning style preference. Teachers, however, must recognize the limitations of learning style inventories. The inventories rely on self-report and therefore run the risk of inaccuracy. Moreover, students must not be forever categorized, for indeed people can and do change.

Several authorities argue that teachers should indeed focus on a variety of learning styles. For example, Carole Stice and Mary Bess Dunn (1985) assert that application of learning styles should never result in a narrowing of the learner's focus. Rather, learning styles should enrich and expand.

> Further, it seems likely that a characteristic of *good* learners is that they have learned to modify their natural preference relative to their understanding of the task. This implies that good learners have benefited from a variety of instructional experiences.

They further remind teachers:

> Since there is also data to suggest that teachers present material, emphasize aspects of content, and design instructional tasks reflective of their own assessed learning styles (Dunn 1982), teachers may need help in designing lessons that support *all* learner styles.

To successfully apply learning styles research to their classrooms, teachers must be cognizant of their own styles and how their personal styles can affect their students. They must be wary of favoring kids who have the

same style as they do. Biases can be subtle, and frequently unconscious.

In sum, teachers have a wealth of learning style tools at their fingertips. It is essential, however, that teachers fully understand and be prepared to apply the learning style rationale in their classrooms. The most prominent advocates of learning styles seem to agree that the use of learning styles is not a sporadic program. Proper use of learning styles entails an attitude first, and then a method. Application of learning styles in the classroom should not take up a pronounced segment of class time, but rather consists of an attitude and a delivery technique that can have a startling, pervasive, and ongoing impact upon individual learners.

Many have researched the effects that learning style methods and inventories can have upon students. The following section examines some of their findings.

The Effects of Learning Styles on Student Achievement

Ross in 1985 compiled a list of some of the relevant findings regarding learning styles. Selections from his list follow:

> "Krimsky (1983) identified fourth graders' preferences for either bright or low light and tested them in two types of carefully designed, extremely different, illuminated environments. Statistical procedures documented that each group performed significantly better (.001) when matched; both performed significantly less well when mismatched."

> "Murrain (1983) investigated seventh graders who evidenced preferences for either warm or cool temperatures. The data documents higher performance (.10) by matched groups. Nearly four times as many students preferred a warm room in which to learn; even the non preferenced students attained higher scores on the test in a warm setting."

> "Della Valle (1984) tested all the seventh graders in a large, New York junior high school to identify their mobility preferences. Fully half the population evidenced strong mobility needs when concentrating. All students were taught and evaluated in situations that required them to remain seated while learning and being tested. Each group achieved statistically higher scores (.001) in congruent conditions than in the settings that were incongruent with their diagnosed learning styles."

> "Ross (1984) compared the achievement scores of two general math classes. One taught in mid-morning (preferred by students) and the other in late morning (just before lunch, not preferred by students). The early class averaged a B grade; the later class averaged a C-. Similarly, Virostko (1983) matched and mismatched 286 elementary students for time of day preferences

in math and reading. Congruent matches achieved significantly higher (.001) than those who were not matched."

"Weinberg (1983) identified perceptual strengths of 69 third grade arithmetic students identifying auditory and visual modality preferences. They were taught a subtraction unit through instructional materials that either complemented or were dissonant from their revealed preferences. Students performed significantly better (.05) when taught through complementary strategies."

Special educator Jacqueline Kelley-Kinnie (1986) describes the development of a School Assessment Team that assessed the needs of special students across all basic skill areas and provided support and training for staff to increase individualized inclass programming to meet these students' needs.

> Our elementary system had become, we believed, so attuned to verbal-auditory teaching methods and strengths that the student whose learning styles and preferential modalities included visual, visual-tactile, and haptic ways of learning were missing out, lagging behind academically, developing behavior problems, and becoming "learning disabled" somewhere between grades two and six. How to intervene effectively, to "catch the kid" before the "kid got caught" within an inviable system became our challenge (Kelly-Kinnie, p. 42).

The findings led the team to consider the implementation of a multisensory class in each of the first three grades. Learning styles research was used to identify students with multisensory instructional needs. These students can become more successul learners and avoid a "learning disabled" label.

In Florida, the Governor's Task Force for Disruptive Youth found that in a sample of more than 500 adults who did not complete eighth grade, 99.6 percent were sensing types. The Task Force also discovered that of 671 finalists for National Merit Scholarships, 556 tested as intuitive types (McCaulley and Natter 1974, 1980). In 1981, Lynch (in Ross 1985) analyzed eleventh- and twelfth-grade students identified as initial or chronic truants and matched their time-of-day preferences. Truancy patterns were reversed.

These findings might be vital to developing an understanding of how to deal with at-risk students. Educators might begin to question: "Do our at-risk students test as sensor types? If so, how can we better accommodate their learning styles?"

In sum, research indicates that learning styles do affect the achievement and success of students. The effect is real, and to ignore it by neglecting learning styles hinders educational improvement, as Thomson (1986) concludes:

We believe that until the diagnostic phase of a comprehensive instructional program is included in the overall educational framework, and until proper attention is given to student learning styles within that diagnostic function, that schools will continue to fall far short of our potential for students and their diversity.

Application of learning styles enables educators not only to cope with diversity in classrooms, but to celebrate diversity as well.

Chapter 2

Learning Styles in Practice

In this chapter, several Oregon educators share their opinions and strategies about learning styles. Each has administered a variety of learning styles inventories to students, and each has a different opinion about which inventory is best. Apparently, the learning style of the teacher affects the choice of inventory viewed as most accurate and useful.

Most of these educators are connected to a growing network of teachers devoted to expanding use of learning styles in Oregon's classrooms. That network, the Oregon Learning Styles Association, believes learning styles is not a fad or a panacea for all the ills of traditional teaching and learning.

Organized by educators who had attended several learning styles conferences, the Oregon Learning Styles Association began printing a newsletter and electing officers in 1986. The association informs approximately 175 members about conferences and upcoming events, grant funding opportunities, selected publications, as well as information about learning style inventories and research. The association's goal is to develop a network of learning styles practitioners.

President Jill Gomery believes that before the network becomes complete, a "paradigm shift" in education must occur. That is, teachers must support the notion that children have just as much to say about learning as the teacher does. Herein may lie the biggest block to widespread use of learning styles. When the block is lifted, however, many teachers respond with excitement. Gomery echoes a statement from an enlightened educator: "Learning styles gives me permission to be more creative in my classroom."

In addition to the growing network of teachers connected to the Learning Styles Association, many talented and gifted (TAG) programs have made learning styles an integral part of their educational philosophy. It seems Oregon's TAG teachers (responsible for the top 3 to 5 percent of students) are keenly aware of learning styles. To these teachers, we now turn.

Learning Styles among Exceptional Children

Bob Siewert, now in his tenth year as specialist for the gifted program in the Oregon Department of Education, defines *learning style* as a combination of preferences and skills that kids use to optimize learning. Oregon's TAG teachers, according to Siewert, all use learning styles in some way and apply learning styles in their teaching techniques more than do most regular classroom teachers. In a regular classroom, more "little bodies and little minds" further complicate working with learning styles. Teachers must also be wary of sacrificing valuable skill building time (reading, computing) for the sake of styles.

Learning styles are a cornerstone to the individualized philosophy TAG children grow accustomed to. To a lesser degree, learning styles can also foster individuality in regular classrooms. Siewert suggests that teachers who use groups and vary lessons (combining visual, tactile, and kinesthetic experience) are using style--whether they know it or not. "I'd like to see learning styles applied more completely in regular classrooms, with direct supervised instruction."

Certainly that application is evident in TAG programs. George Wilhelmi, chairperson of the TAG program in Eugene Public Schools, believes the current focus on learning styles is not a mistake: "You need to know about learners before you can effectively teach critical thinking. Children in the TAG program are taught how to be independent producers of knowledge." In part, this ideal is accomplished by (1) finding out the student's and the teacher's learning styles, (2) finding out the student's interests, and (3) teaching skills to go about developing those interests.

Most of Eugene's TAG teachers administer inventories twice early in the year. Teachers recognize that no one style dominates an entire class. To cope with diverse styles, teachers apply a variety of styles. Wilhelmi points out that some "good teachers" intuitively recognize and adapt to differing learning styles without inventories. These teachers are few, however.

Although we shouldn't "go crazy" about styles, we can go further than past and present practice, Wilhelmi asserts. He recalls that when Gregorc keynoted the Oregon Association for Talented and Gifted conference in 1983, he emphasized the potential teachers have to deepen their understanding of the uniqueness of individual learners. Wilhelmi stresses that learning styles have broad implications for our relationships with others:

> The more we find out about learning style differences, the more tolerant we become of differences between ourselves and others. We input and output information differently. Everyone different from us becomes suspect .... Schools send out conformist messages. We need to give kids permission to be themselves. Creativity of our species will be greatly enhanced if we allow people to be different.

Learning Styles for Regular Classrooms

Although learning styles are applicable to all classrooms, Wilhelmi sees several reasons why learning styles are less a part of regular classrooms. Regular classroom teachers may view learning styles as a fad that few teachers take seriously. Such a view prevents teachers from investing time, energy, and involvement. Others simply aren't trained to effectively apply learning styles to their classrooms. If learning styles research and application is missing from preservice training, then teachers will have serious trouble adapting to styles.

Columbia High School, Troutdale

In the late seventies, Columbia High School in Troutdale, Oregon, took a major leap into learning styles. Columbia's entire staff was encouraged (and the majority complied) to use the Hill Learning Style Inventory to assess their own learning styles and those of Columbia's students. Hill's model had no less than twenty-eight modalities (ways in which we sense and process information). In the early eighties, Columbia shifted over to the Dunn model. With the Dunn model, Columbia could send the raw data to the Dunns to be analyzed and summarized. Rockwood Middle School (Columbia's feeder school) quickly followed suit.

A concentrated effort had begun. But as Jack Ottman, a social studies teacher at Columbia and treasurer of the Oregon Learning Styles Association admits, the push may have been too great. For in the mideighties interest waned, and many present teachers are not involved. Ottman speculated that only about 25 percent of Columbia's teachers continue to use learning style inventories. Choosing which inventory to use has become a matter of personal preference.

Although interest in learning styles at Columbia has faded, Ottman remains hopeful:

> In this school you get burned out if somebody pushes an issue so hard . . . . This year with Rita Dunn coming, I hope to get a rededication to what we're doing with learning styles. Hopefully, we can put together a schoolwide data base that won't be too costly.

I observed Ottman's pleasing idealism with his students on the first day of class after spring break. He began class by telling his students that "understanding how you do what you do, and how I do what I do, is crucial

for a successful education." He devotes the first week of class to giving and explaining Learning Style Inventories to students. Later he refers to learning styles, while intuitively using a variety of modes (such as visual, auditory, and kinesthetic) to impart information.

For several years, Ottman has applied learning styles to his teaching. His experience indicates that learning styles are applicable to every student and every situation. He has witnessed teachers undergo incredible changes in teaching ability and grow more motivated and satisfied about their work following their adoption of learning style methods. He has seen discipline problems "reduced to zero" once students understand that their teachers are interested in helping them learn as much as they can.

When Ottman conducted statistical analysis of his students and their styles, he found that 83 percent of the failing grades went to random style students whereas 71 percent of the A's went to sequential style students. What implications do these conclusions have for at-risk kids? Could it be possible that at-risk kids have a predominant style that precludes learning in the way teachers standardly prescribe?

According to Ottman, the ideal is that every teacher and every student recognize his or her own learning style and act upon that recognition. However, he cites barriers to achieving that ideal.

First, Ottman contends that we need more practical models to use learning styles. Inventories need to be updated and improved. New models that give teachers specific hands-on advice about individual learning styles can go far toward increasing teachers' motivation and involvement. Second, Ottman believes that preservice training in learning styles is essential. Professors of curriculum and teacher instruction play a vital role. Ottman quips, "We at least need to get professors to know what the hell learning styles are!"

Dolores Vrooman, principal at Columbia High School, agrees that preservice training in learning style methods is essential. Preservice training should also focus upon classroom management and instructional skills.

Corbett Middle School

Ann Hymel, a sixth-grade teacher at Corbett Middle School and vice president of the Oregon Learning Styles Association, would like to see learning styles become a basic part of the teacher training curriculum. She notes with enthusiasm the positive impact a series of inservice learning style workshops had upon her teaching abilities:

> Before learning styles I was structured, rigid, and strict. I was missing some learners. For a year we had morning and afterschool inservices for the school's staff. At these workshops, we each developed a unit to be used in

> classrooms . . . . With my new unit, when the kids got up and shared and had some freedom because I didn't impose so strictly what they had to do, they really changed. When the kids who were flunking tests could just get up and *talk* about what they knew, they were wonderful. They knew more than I thought they knew. They shared concepts that were better than what the kids who had gotten A's on tests seemed to know.

With the support of her principal and others, Hymel developed a year-long curriculum that applies McCarthy's 4MAT design, along with consideration of modalities. For Hymel's students the school year begins rather traditionally with an emphasis on classroom management. Then she gradually introduces learning styles. For about three weeks, the students become familiar with their own style, with their teacher's style, and with the various ways learning styles can be applied to their learning. Although learning styles introduce an entirely new host of freedoms to students, students need to have limits. She clarifies that "the bottom line is the teacher is in charge."

Hymel is a true practitioner of learning styles. At their desks, her students sit erect, eyeing their teacher with respect and full attention. She leads her class through "Gyotaku," the Japanese art of fish painting. Using the auditory mode, the children repeat the Japanese work twice in unison. Applying the visual mode, Hymel displays her own fish painting. In pairs the children approach the two real (but quite dead) colorfully painted fish. Each child brushes on additional paint, and together they carefully press crisp white sheets of paper gently over the fish. A bright picture emerges. While they press, Hymel points out various parts of the fish to her students.

Meanwhile, the rest of the class works on an outdoor education booklet in preparation for outdoor science camp. Some work in pairs or small groups, and others work individually. Although there is noise and some restlessness, confusion and chaos are surprisingly absent. The climate in Hymel's class is one of energy, respect, and vivacity. There is a feeling that this process of learning is natural and that children are allowed to flourish with it.

Hymel admits that to actively apply learning styles, the teacher must sacrifice some content. Hymel feels that the lessons of style supersede content:

> You cannot fill kids with facts–there are too many and they change too fast. Of course, you need to give kids the basics. But then you need to teach students how to learn. The ultimate goal is to teach them how to learn anything, any place, any time. Once they have that skill of learning to learn, then they can handle almost anything.

Use of learning styles has helped Hymel teach students about learning. According to Hymel, many teachers in Oregon are beginning to reap the

benefits of learning styles. As more teachers are equipped with learning style methods, she foresees a growing impact:

> In addition to a big reduction in high school dropouts, I would predict some college students will challenge the way some college professors teach, I would predict that a lot of problem-solving skills for students would start to evolve. Communication would be improved.

Beside preservice training in learning styles, Hymel argues that administrative support is needed to encourage the application of learning styles. She notes, "You have to have a principal that encourages you to try new things. Most of the principals I've worked with think styles are great. The long-range effects are phenomenal."

Support from coworkers and workshops that teach new techniques are also helpful. Parents, too, can get involved in workshops and presentations about learning styles.

The Experiences of Other Educators

Some other educators are less optimistic. Mary Johnson, elementary curriculum coordinator in the Corvallis School District, suggests that fully applying learning styles is an overwhelming task. For teachers to successfully use learning styles, two changes must occur. First, teachers need extra time to develop new techniques. Second, teachers need support, administrative or otherwise, that keeps teachers up to date about new research.

Johnson does not think the application of learning styles is a hopeless endeavor, however. She cautions that, although we should not "go overboard" with learning styles, learning styles can help broaden our perspective about the way learners best learn. With preservice instruction and supervisory support while teachers explore the application of style, learning styles can be a valuable delivery technique. Learning styles might prove particularly useful in helping at-risk kids, she says.

Still, the application of learning styles must survive the journey into a traditional system. Johnson wisely notes that change takes a long time in education to finally impact the classroom level. If educators cannot see how an idea or concept fits with current practices and with priorities, then a short-lived trend can result.

In a survey of doctoral students in the Division of Educational Policy and Management at the University of Oregon, respondents did not view learning styles as a fad. Page Dettmann, who served for seven years as gifted program director in the state of Missouri, noted that "the title *learning styles* may be a fad, but the practice is not." Al Hillier, assistant superintendent of

fiscal operations for Centennial School District, notes that cost of analysis can be a barrier to application of learning styles. He agrees that educators need to be aware of variations in the way people learn and would support a preservice class in learning styles.

Peter Nordbye, who served as director of special education in the Parkrose School District, noted that the concept of learning styles may "recycle." "When I started teaching we implemented the multimodality approach. Marie Carbo and Rita Dunn have only redefined the same concepts used twenty years ago." Having worked with styles, Nordbye articulates pros and cons:

> All students have a more equal access to learning. I believe that ultimately learning is more interesting and dynamic when learning style theory is applied. It may take more preparation time initially to integrate learning styles theory into curriculum and instruction.

Nordbye believes that learning style techniques are "critical for the success of all children . . . . If special education instructors are not using learning styles theory in some form, they are likely to be unsuccessful." Douglas Lamoreaux, who has taught for ten years at McMinnville High School, notes that "attention to learning styles should strengthen achievement levels, students' self-concept, and motivation to learn." However, "one cannot always assume that lack of achievement or low self-concepts are exclusive results of failure to attend to learning styles."

Indeed, a lack of learning styles awareness in a classroom does not necessarily cause a teacher's students to fail. As Corvallis's Johnson pointed out, "All these years we've done without learning styles." And some teachers are quite automatically adapting to the different needs of different students without the aid of learning styles inventories.

Jan Altig, staff development specialist in Tigard School District, warns that learning style inventories unnecessarily label and categorize students. However, that is not to say that Altig is not an advocate of learning styles. She is. Altig suggests that teachers can be aware of learning styles without having to test individual learners. Students can be taught to learn in a variety of ways and in various modalities. Every child has a chance to shine in his or her particular mode. Altig emphasizes the importance of realizing that research is always going on and conclusions are changing. Teachers must be flexible in applying changing research.

Many of Oregon's educators have committed themselves to learning styles. Although the controversy between complete individualization and teaching a variety of styles remains, most view this dissension as an aside to the hopeful future of learning styles. These committed individuals share an ideal vision where learning style application is commonplace among teachers.

They envision groups of teachers planning together and helping and observing each other while a *shift* to learning styles finds its way into Oregon's classrooms. Before that vision becomes reality, educators must support the shift instead of resisting it.

Chapter 3

Conclusion and Recommendations

The current theory and practice of learning styles boldly respond to the call for educational reform. Advocates of learning styles argue that if we can successfully make the paradigm shift that celebrates the diversity of our nation's youth, the effects will be profound. When learning styles become a pervasive force in America's classrooms, children will be the ultimate benefactors. Children will learn to honor and accept their uniqueness and the differences among their peers. Learning will become a creative endeavor, where conformity is less cherished than individuality.

Oregon's educators have made an excellent start. Many have committed time, effort, and enthusiasm to the mission of applying learning styles. These educators have provided an abundance of ideas, strategies, and zeal. However, their mission is far from complete. From their experience and from the findings of prominent researchers who have made major contributions nationwide, the following recommendations are drawn:

1. Gain administrative endorsement. In the case of learning styles, administrative support is not a luxury but a necessity. Key administrators ranging from the state superintendent to building principals and their assistants need to be aware of, encourage, and endorse the assumption of learning styles that children are wonderfully unique and that it is the schools' job to honor their diversity. There needs to be common agreement about the fundamental thread that ties the strands of learning styles research together. Only then can a superior educational paradigm replace ineffective educational traditions.

2. Gain active administrative support at the building level. Principals and their administrative assistants can encourage the application of learning styles not only with verbal reinforcement but with active involvement as well. Principals can arrange inservice time or workshops led by educators who have worked extensively with learning styles. If time permits, principals or their assistants can provide extra supervision to teachers who are integrating

learning styles in their classrooms for the first time.

Faculty meeting time can also be devoted, in part, to discussion about ongoing work with learning styles. Building administrators can at least become familiar with their own styles as well as the styles of their coworkers to show teachers that they, too, honor diversity. If building administrators do not support learning styles, at least in theory, attempts to uniformly apply the concept will likely fail.

3. Coordinate preservice training for teachers. Educators interviewed here unanimously agree that learning styles should be integrated in university or college curriculum for students training to be teachers. Of these, most feel that there is enough material to develop an entire course devoted to learning styles. Curriculum planners should take an indepth look at the learning styles research to see if they agree.

A course in learning styles should not only focus on reading and writing about learning styles, but also allow students to apply the numerous methods and inventories with their peers. Students can also be encouraged to examine their own learning styles and discover how their styles will affect their relationships with their students. The potential for offering an exciting and popular course in learning styles is evident.

4. Encourage teachers to apply learning styles. As stated earlier, most of Oregon's educators are somewhat acquainted with learning styles. The next step is for teachers to seek the knowledge that allows them to confidently and intelligently apply styles in their classrooms. Teachers and administrators are encouraged to join the Oregon Learning Styles Association, to attend workshops, and to actively participate in inservice training. Teachers are also encouraged to read about learning styles. Guild and Garger's book *Marching to Different Drummers* makes for an insightful and entertaining start in the study of style.

After careful consideration, teachers can begin to use learning style inventories in their classrooms. Yet, teachers must recognize the limitations and potential inaccuracy inherent in the categorization that inventories promote. Inventories can help teachers and students learn more about themselves. They can stimulate exciting information about the nature of learning. But there are other considerations besides recognition of learning styles. Teachers must recognize that each student is unique, complex, and ever changing and that only part of this complexity is attributed to learning style. In coping with differences among students, teachers can find help in learning styles research, tools, and methods, but, to a great extent, they must cope on an ad hoc, trial-by-error basis.

5. Involve students and parents in learning styles efforts. From early on, students need to learn about learning. Unfortunately, how we learn is underemphasized in education. Instruction about learning styles is a way for students to explore the learning process. Becoming aware of how we

best learn undoubtedly makes learning a more enjoyable and creative endeavor. Students can learn to capitalize on the personal learning style strengths they discover. Hopefully, that discovery will nurture a willingness to learn independently. Time in class devoted to the study of learning styles can enable students to become independent learners.

Parents, too, can become actively involved. They can be encouraged to observe classrooms where learning styles are at work. Parents can participate in workshops and assess their own child's progress in terms of styles. In these efforts, parents may come to accept their child's uniqueness and learn to encourage the development of his or her strengths.

Indeed, what may have once been viewed as weakness in a particular child may be transformed into a strength. For example, some children learn best in kinesthetic modes. They like to do, to move, and to experiment. Such children may be considered "discipline problems." When a teacher and parent harness the kinesthetic child's energy toward the appropriate purpose–learning –then a problem turns into a plus.

6. Continue to develop a research base. Although much has been done, there is still great need for quality research about learning styles. One need is to assess the effects of learning style inventories and methods on teachers and their students. Additionally, existing learning style inventories can be improved and new inventories created. With new information in these areas, learning style practitioners can begin to address the controversy that frequently separates them: Should students be taught to focus on one style or to respond flexibly to a variety of styles?

In conclusion, in learning styles, as in many other areas, educators face an option to change. Change requires a great deal of commitment, organization, enthusiasm, and, above all, an open mind. For educators to successfully make a change, especially one that is ideological as well as practical, depends on whether they see the change as a high priority.

Learning styles are an innovation that has come of age. We live in a highly complex, technological, and individually diverse age. In our effort to deal with modern problems, diversity must be channeled in positive and productive ways. Educators can respond to this challenge by learning how to celebrate diversity and how to use diversity as a tool creatively to confront change. Understanding learning styles can help all learners grow less suspicious and instead more appreciative of individual differences. Whereas in many cases such differences serve to separate people, a proper understanding of those differences can induce them to cooperate.

References

Association for Supervision and Curriculum Development. "Learning/Teaching Styles and Brain Behavior." Tape recording of a panel discussion held at the annual conference of the ASCD, New Orleans, recorded by National Cassette Services, March 1987.

Case, Chester. "Supporting Faculty Leadership for Change." In *Renewing the American Community College: Priorities and Strategies for Effective Leadership*, edited by W. L. Deegan and D. Tillery. San Francisco, CA: Jossey-Bass Publishers, 1985.

Dunn, Rita, and Dunn, Kenneth *Practical Approaches to Individualizing Instruction: Contracts and Other Effective Teaching Strategies*. West Nyack, NY: Parker Pubishing Company, Inc., 1972.

Dunn, Rita; Dunn, Kenneth; and Price, Gary E. *Learning Style Inventory*. Lawrence, KS: Price Systems, Inc., 1978.

Gregorc, Anthony F. *An Adult's Guide to Style*. Maynard, MA: Gabriel Systems, Inc., 1982.

Guild, Pat B., and Garger, Stephen. *Marching to Different Drummers*. Alexandria, VA: Association for Supervision and Curriculum Development, 1985.

Kelley-Kinnie, Jacqueline K. "Eliminating Artifacts from the System." *Academic Therapy*, 22, 1, (September 1986): 41-51.

McCarthy, Bernice. *The 4MAT System: Teaching to Learning Styles with Right/Left Mode Techniques*. Barrington, IL: Excel, Inc., 1980.

McCaulley, Mary H., and Natter, Frank L. *Psychological (Myers-Briggs) Type Differences in Education*. Gainesville, FL: Center for Applications of Psychological Type, Inc., 1974, 1980.

National Association of Secondary School Principals. *Student Learning Styles: Diagnosing and Prescribing Programs*. Reston, VA: NASSP, 1979.

Ross, Dorian. "Learning Styles." Unpublished research report. Alaska, 1985. 14 pages. ED 269 201.

Smith, Douglas K., and Holliday, Peter J. "Learning Style and Academic Achievement in Fourth, Fifth, and Sixth Grade Students." Paper presented at the annual meeting of the American Educational Research Association, San Francisco, April 16-20, 1986.

Stice, Carole F., and Dunn, Mary Bess. "Learner Styles and Strategy Lessons: A Little Something for Everyone." Paper presented at the annual meeting of Southeastern Regional Conference of the International Reading Association, Nashville, TN, November 2-5, 1985.

Thomson, Scott D. "Strategies for Improving Achievement within Diversity." Paper presented at meeting of the International Intervisitation Programme in Educational Administration, August 10-13, 1986, in Hawaii; August 17-21, 1986, in Fiji; and August 24-29, 1986, in New Zealand.

Interviews

Jan Altig, Staff Development Specialist, Tigard School District, Tigard, OR. Telephone interview, April 16, 1987.

Atkins, Les, Director of Student Services and Special Education, Oregon Department of Education. Telephone interview, April 17, 1987.

Jill Gomery, Curriculum Administrator and President of the Oregon Learning Styles Association, Portland Public Schools, Portland, OR. Telephone interview, April 23, 1987.

Ann Hymel, Teacher at Corbett Middle School and Vice President of the Oregon Learning Styles Association, Corbett, OR. Observation and interview, April 7, 1987.

Mary M. Johnson, Elementary Curriculum Coordinator, Corvallis School District, Corvallis, OR. Telephone interview, April 17, 1987.

Walter Koscher, Coordinator of School Finance and Data Information Services, Oregon Department of Education. Telephone interview, April 17, 1987.

Jack Ottman, Teacher at Columbia High School and Treasurer of the Oregon Learning Styles Association. Observation and interview, April 7, 1987.

Bob Siewert, Specialist for the Gifted Program, Oregon Department of Education. Telephone interview, April 17, 1987.

Dolores Vrooman, Principal of Columbia High School. Interview, April 7, 1987.

George Wilhelmi, Chairperson of TAG program, Eugene School District, Eugene, OR. Interview, April 6, 1987.

In addition, a survey was administered to the following doctoral students in the Division of Educational Policy and Management, University of Oregon, Eugene, OR, April 1987: Page Dettmann, Al Hillier, Douglas Lamoreaux, and Peter Nordbye.

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